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REMARKS

Status of Claims

Claims 1-32 are pending. Claims 13-16 and 18-32 have been rejected under 35 U.S.C. §112, second paragraph. Claims 1-5, 7, 9-21, and 27-32 have been rejected under 35 U.S.C. §102(b). Claims 17 and 32 have been cancelled without prejudice. Claims 1, 4, 6, 8, 9, 13, 15, 18, 21-25, and 27 have been amended. Claims 6, 8, and 22-25 in particular have been amended in accordance with the Examiner's indication that such claims would be allowable if rewritten in independent form. Support for the amendment to claim 1 is found at page 6, lines 4-8 and 14-16, of the specification as originally filed. Support for the amendment to claim 18 is found at page 4, line 32, through page 5, line 3 and at page 9, lines 1-2. Claims 1-16 and 18-31 remain for consideration upon entry of the present Amendment. No new matter has been added.

Drawing Objection

The Examiner has objected to the drawing because Figure 1 shows two arrows labeled as "26" and has required that a proposed drawing correction be submitted. Applicants submit herewith proposed corrected Figure 1 showing the two arrows relabeled as 26A and 26B. Applicants, therefore, respectfully request the withdrawal of the drawing objection.

Claim Rejections – 35 U.S.C. §112, second paragraph

Claims 13-16 and 18-32 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter regarded as the invention. As stated above, claims 17 and 32 have been cancelled. Applicants have addressed all of the Section 112, second paragraph, issues pointed out by the Examiner with respect to claims 13, 15-16, and 19-31.

With respect to claims 14 and 28, the Examiner asserts that it is unclear how the recited angle is defined. Applicants direct the Examiner to page 8, lines 29-33, of the specification as filed, which recites how the angle is defined.

The Examiner alleges that claim 18, which recites that at least two corrugated strips are positioned in a gap defined by two partitions, is not enabled. The Examiner correctly notes that page 5, lines 27-28, states that "[a] strip 16 is positioned

in each gap 14 and together with the partitions 12 defines a plurality of passages 18." However, the use of at least two corrugated strips positioned in a single gap defined by two partitions is supported in the specification at page 4, line 32, through page 5, line 3, and at page 9, lines 1-2. Thus, Applicants assert that claim 18 is enabled.

Claim Rejections – 35 U.S.C. §102(b)

Claims 1-5, 7, 9, 10, 12-21, and 27-32 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,558,238 to Collins (hereinafter "Collins").

Collins discloses a nozzle tip having a bore 9 that extends the length of a body forming part of a nozzle and has an inlet 11 and a discharge 12. The nozzle tip further includes a straightener assembly or grill work 13 inserted in the discharge end 12 of the nozzle tip. The straightener assembly comprises corrugated rings 15, 16, and 19 as well as supporting rings 17 and 18. The supporting rings are soldered or joined together by any suitable means. (Column 2, lines 12-23). In a modified embodiment, a venturi is provided upstream of the straightener assembly and one of the supporting rings is omitted. (Column 2, lines 26-31). Fluid streams passing through the straightener assembly merge and give a directional flow that is slightly toward or converging toward an axis of the nozzle tip. (Column 2, lines 51-55).

Collins fails to disclose, teach, or suggest means within gaps defined by partitions, the means defining a plurality of passages such that at least one passage in each gap has an orientation with a tangential component having a magnitude greater than zero so as to impart a tangential velocity component to a packet of fluid flowing therethrough, as is recited in Applicants' amended claim 1. Collins further fails to disclose, teach, or suggest at least two corrugated strips positioned in a gap to define a plurality of passages wherein at least two of the passages have an orientation having a tangential component having a magnitude greater than zero, as is recited in Applicants' amended claim 18. The structure of Collins, unlike the structure of Applicants' invention as recited in either claim 1 or claim 18, fails to impart a tangential velocity component to the flowing fluid. Thus, the structure of Applicants' invention as recited in either claim 1 or claim 18 is patentably distinct from the structure of the Collins invention.

Claims 1-5, 7, 9, 10, 12-21, and 27-32 have also been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,572,445 to Cannon, Jr., et al. (hereinafter "Cannon").

Cannon discloses a gas burner flame arrester having a core that compresses a filler 39 disposed in the space within a shell 24 extending radially from an inner wall of the shell 24 to an axially-positioned stem 30. The filler 39 is formed of "plain and longitudinally corrugated light gauge filler strips 40 and 41, respectively, extending in alternating, closely packed convolutions or turns about the stem 30...." (Column 4, lines 37-48).

Cannon fails to disclose, teach, or suggest means within gaps defined by partitions, the means defining a plurality of passages such that at least one passage in each gap has an orientation with a tangential component having a magnitude greater than zero so as to impart a tangential velocity component to a packet of fluid flowing therethrough, as is recited in Applicants' amended claim 1. Cannon further fails to disclose, teach, or suggest at least two corrugated strips positioned in a gap to define a plurality of passages wherein at least two of the passages have an orientation having a tangential component having a magnitude greater than zero, as is recited in Applicants' amended claim 18. The structure of Cannon, unlike the structure of Applicants' invention as recited in either claim 1 or claim 18, fails to impart a tangential velocity component to the flowing fluid. Thus, the structure of Applicants' invention as recited in either claim 1 or claim 18 is patentably distinct from the structure of the Cannon invention.

Claims 1-5, 7, 9-21, and 27-32 have also been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,347,381 to Minch et al. (hereinafter "Minch").

Minch discloses an apparatus for treating sewage and industrial wastes that comprises a cylindrical cellular type media construction 10. "The media includes a continuous separator member 11 spirally wound upon itself and a continuous fluted member 12 spirally wound within the spaces between adjacent surfaces of separator member 11...." (Column 2, lines 39-44). The angle of the fluted member may be modified (formed at an angle to the vertical axis of the construction) to avoid the free fall of liquid through the channels 15 of the fluted member 12. (Column 4, lines 16-23). The angle modification, however, is consistent in directional orientation throughout the construction 10. (Figures 7 and 9).

Minch fails to disclose, teach, or suggest gaps having orientations in which the orientations in adjacent gaps adopt different directional rotations, as is recited in Applicants' amended claim 1. Furthermore, Minch fails to disclose, teach, or suggest corrugated strips defining a plurality of passages, at least one of the passages on

each corrugated strip having an orientation with a tangential component having a magnitude greater than zero, and the orientations on each corrugated strip adopting different directional rotations, as is claimed in Applicants' amended claim 18. The differing directional rotations of the passage orientations is in direct contrast to the teachings of Minch, in which the spiral winding of the continuous fluted member mandates that the angle of the channels of the fluted member be consistent throughout the construction.

Claims 1-5, 7, 9-21, and 27-32 have further been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,415,233 to Roussakis et al. (hereinafter "Roussakis").

Roussakis discloses an apparatus for extinguishing a flame. The apparatus comprises a plurality of surfaces that redirect or interrupt the flow of the flame front from an upstream element 60 into a downstream element 64 in the direction of flow 26. The element 60 has a plurality of channels defined by a crimped metal ribbon 86. The channels extend longitudinally parallel to the direction of fluid flow. (Column 5, lines 24-31).

Roussakis fails to disclose or teach means within gaps defined by partitions, the means defining a plurality of passages such that at least one passage in each gap has an orientation with a tangential component having a magnitude greater than zero so as to impart a tangential velocity component to a packet of fluid flowing therethrough, as is recited in Applicants' amended claim 1. Roussakis further fails to disclose, teach, or suggest at least two corrugated strips positioned in a gap to define a plurality of passages wherein at least two of the passages have an orientation having a tangential component having a magnitude greater than zero, as is recited in Applicants' amended claim 18. The structure of Roussakis, unlike the structure of Applicants' invention as recited in either claim 1 or claim 18, fails to impart a tangential velocity component to the flowing fluid. Thus, the structure of Applicants' invention as recited in either claim 1 or claim 18 is patentably distinct from the structure of the Roussakis invention.

To anticipate a claim under 35 U.S.C. §102, a single reference must disclose each and every element of the claimed invention. *Lewmar Marine v. Barient Inc.*, 3 USPQ2d 1766 (Fed. Cir. 1987). Absence from the reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Applicants respectfully submit that because neither Collins, Cannon, nor Roussakis discloses or teaches means within gaps defined by partitions, the means

defining a plurality of passages such that at least one passage in each gap has an orientation with a tangential component having a magnitude greater than zero so as to impart a tangential velocity component to a packet of fluid flowing therethrough, amended claims 1 and 18 are not anticipated by the Collins, Cannon, or Roussakis references. Further, because Minch fails to disclose or teach gaps having orientations in which the orientations in adjacent gaps adopt different directional rotations, as is recited in Applicants' amended claim 1, and because Minch also fails to disclose or teach corrugated strips defining a plurality of passages, at least one of the passages on each corrugated strip having an orientation with a tangential component having a magnitude greater than zero, and the orientations on each corrugated strip adopting different directional rotations, as is claimed in Applicants' amended claim 18, claims 1 and 18 are not anticipated by Minch. For at least this reason, Applicants submit that claims 1 and 18 are allowable.

Dependent claims, by definition, add limitations that further define the subject matter of the independent claims from which they depend. Because claims 2-5, 7, and 9-16 depend from claim 1, and because claim 1 is believed to be allowable for at least the reason presented above, Applicants assert that claims 2-5, 7, and 9-16, because they add limitations that further define the subject matter of independent claim 1, are allowable. Furthermore, because claims 19-21 and 27-31 depend from claim 18, and because claim 18 is believed to be allowable for at least the reason presented above, Applicants assert that claims 19-21 and 27-31, because they add limitations that further define the subject matter of independent claim 18, are allowable.

Conclusion

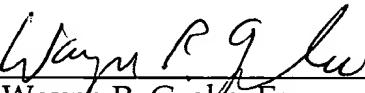
Applicants believe that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein are allowable to Applicants. In view of the foregoing points that distinguish Applicants' invention from those of the prior art and render Applicants' invention novel, Applicants respectfully request that the Examiner reconsider the present application, remove the rejections, and allow the application to issue.

If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is invited to telephone the undersigned.

If additional charges are incurred with respect to this Amendment, they may be charged to Deposit Account No. 13-0235 maintained by Applicants' attorneys.

Respectfully submitted,

By



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